

1 IN THE CLAIMS:

2 Please amend the claims as follows:

3 1. Withdrawn

4 2. Withdrawn

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6 4. Previously Withdrawn

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10 8. Withdrawn

11 9. Previously Withdrawn

12 10. Withdrawn

13 11. Withdrawn

14 12. Withdrawn

15 13. (Previously Amended)

16 In a harvester for vine crops, such as tomatoes, wherein the vines are severed near ground
17 level and removed from the ground with severing means, where the harvester has a wheel-
18 mounted frame having a forward end, a rear end, a right side, a left side and a center,
19 means for moving said harvester forwardly in a field, pickup means adjacent said forward
20 end for picking up crops and attached vines from the field and carrying the crops and vines
21 rearwardly and upwardly, and separating means for separating crops from the vines, an
22 improved separating means comprising:

23 (a) a drum housing;

24 (b) a drum assembly disposed within the drum housing, the drum assembly
25 comprising: (i) a drum having a first end and a second end, the first and
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1 second end defining a longitudinal axis oriented transverse to the travel
2 direction of the harvester, and a multiplicity of tines extending radially
3 from the outer peripheral surface of the drum; (ii) a first shaft extending
4 through the drum; (iii) a first weight housing adjacent and coupled to the
5 first end, the first shaft extending through the first weight housing; (iv) a
6 second weight housing adjacent and coupled to the second end; (v) a first
7 hydraulic motor coupled to the first shaft; and (vi) a second hydraulic motor
8 for rotating the drum connected to the second weight housing with a spring
9 coupling, the spring coupling comprising a plurality of springs disposed
10 between two end plates, the end plates on either side of a center plate which
11 supports the first shaft; and
12 (c) a plurality of stationary rods mounted adjacent to the tines of the drum such
13 that the tines pass through the stationary rods as the drum rotates.

14 14. (Original)

15 The improved separating means of claim 13, wherein the first weight housing and the
16 second weight housing each comprise: (i) a plurality of weight shafts secured within each
17 weight housing; (ii) a plurality of eccentrically mounted weights mounted on the weight
18 shafts; (iii) transmission means connecting the first shaft to the weight shafts in the weight
19 housings for rotating the eccentrically mounted weights mounted therein.

20 15. (Original)

21 The improved separating means of claim 14 wherein the transmission means comprise a
22 first sheave mounted on the first shaft coupled to the weight shafts of the first weight
23 housing with belts and a second sheave mounted on the first shaft coupled to the weight
24 shafts of the second weight housing with belts.

25 16. (Original)

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1 The improved separating means of claim 14, wherein the total weight of the eccentrically
2 mounted weights is in excess of 450 pounds.

3 17. (Original)

4 The improved separating means of claim 13, wherein the angular velocity of the drum
5 does not exceed 200 revolutions per minute.

6 18. (Previously Amended)

7 In a harvester for vine crops, such as tomatoes, wherein the vines are severed near ground
8 level and removed from the ground with severing means, where the harvester has a wheel-
9 mounted frame having a forward end, a rear end, a right side, a left side and a center,
10 means for moving said harvester forwardly in a field, and pickup means adjacent said
11 forward end for picking up crops and attached vines from the field and carrying the crops
12 and vines rearwardly and upwardly, and separating means for separating crops from the
13 vines, improvements to the harvester comprising:

14 (a) the pickup means comprising: a plurality of ground-engaging conveyors
15 comprising a central conveyor and an outrigger conveyor, the central conveyor and
16 outrigger conveyor extending from the forward end of the harvester, each conveyor
17 having a bottom end and a top end, a cutter attached at the bottom end;

18 (b) the separating means comprising:

19 (i) a drum housing;

20 (ii) a drum assembly disposed within the drum housing, the drum assembly
21 comprising: (1) a drum having a first end and a second end, the first and
22 second end defining a longitudinal axis oriented transverse to the travel
23 direction of the harvester, and a multiplicity of tines extending radially
24 from the outer peripheral surface of the drum; (2) a first shaft extending
25 through the drum; (3) a first weight housing adjacent and coupled to the
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1 first end, the first shaft extending through the first weight housing; (4) a
2 second weight housing adjacent and coupled to the second end; (5) a first
3 hydraulic motor coupled to the first shaft; and (6) a second hydraulic motor
4 for rotating the drum connected to the second weight housing with a spring
5 coupling, the spring coupling comprising a plurality of springs disposed
6 between two end plates the end plates on either side of a center plate which
7 supports the first shaft; and
8 (iii) a plurality of stationary rods mounted adjacent to the tines of the drum such
9 that the tines pass through the stationary rods as the drum rotates.

10 19. (Original)

11 The harvester of claim 18 wherein the wherein the first weight housing and the second
12 weight housing each comprise: (i) a plurality of weight shafts secured within each weight
13 housing; (ii) a plurality of eccentrically mounted weights mounted on the weight shafts;
14 (iii) transmission means connecting the first shaft to the weight shafts in the weight
15 housings for rotating the eccentrically mounted weights mounted therein.

16 20. (Original)

17 The harvester of claim 19 wherein the transmission means comprise a first sheave
18 mounted on the first shaft coupled to the weight shafts of the first weight housing with
19 belts and a second sheave mounted on the first shaft coupled to the weight shafts of the
20 second weight housing with belts.

21 21. (Original)

22 The harvester of claim 19, wherein the total weight of the eccentrically mounted weights is
23 in excess of 450 pounds.

24 22. (Original)

25 The harvester of claim 19, wherein the angular velocity of the drum does not exceed 200
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1 revolutions per minute.

2 23. (Previously Amended)

3 In a harvester for vine crops, such as tomatoes, wherein the vines are severed near ground
4 level and removed from the ground with severing means, where the harvester has a wheel-
5 mounted frame having a forward end, a rear end, a right side, a left side and a center,
6 means for moving said harvester forwardly in a field, and pickup means adjacent said
7 forward end for picking up crops and attached vines from the field and carrying the crops
8 and vines rearwardly and upwardly, and separating means for separating crops from the
9 vines, improvements to the harvester comprising:

10 (a) the pickup means comprising: a plurality of ground-engaging conveyors
11 comprising a central conveyor and an outrigger conveyor, the central conveyor and
12 outrigger conveyor extending from the forward end of the harvester, each conveyor
13 having a bottom end and a top end, a cutter attached at the bottom end, the
14 outrigger conveyor pivotally attached to the central conveyor such that the
15 outrigger conveyor may be pivoted from a first position with the outrigger
16 conveyor in the same relative position as the central conveyor, to a second position
17 with the outrigger conveyor at approximately a right angle to the central conveyor;

18 (b) the separating means comprising:

19 (i) a drum housing;

20 (ii) a drum assembly disposed within the drum housing, the drum assembly
21 comprising: (1) a drum having a first end and a second end, the first and
22 second end defining a longitudinal axis oriented transverse to the travel
23 direction of the harvester, and a multiplicity of tines extending radially
24 from the outer peripheral surface of the drum; (2) a first shaft extending
25 through the drum; (3) a first weight housing adjacent and coupled to the
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1 first end, the first shaft extending through the first weight housing; (4) a
2 second weight housing adjacent and coupled to the second end; (5) a first
3 hydraulic motor coupled to the first shaft; and (6) a second hydraulic motor
4 for rotating the drum connected to the second weight housing with a spring
5 coupling, the spring coupling comprising a plurality of springs disposed
6 between two end plates the end plates on either side of a center plate which
7 supports the first shaft; and
8 (iii) a plurality of stationary rods mounted adjacent to the tines of the drum such
9 that the tines pass through the stationary rods as the drum rotates.

10 24. (Original)

11 The harvester of claim 23 wherein the wherein the first weight housing and the second
12 weight housing each comprise: (i) a plurality of weight shafts secured within each weight
13 housing; (ii) a plurality of eccentrically mounted weights mounted on the weight shafts;
14 (iii) transmission means connecting the first shaft to the weight shafts in the weight
15 housings for rotating the eccentrically mounted weights mounted therein.

16 25. (Original)

17 The harvester of claim 24 wherein the transmission means comprise a first sheave
18 mounted on the first shaft coupled to the weight shafts of the first weight housing with
19 belts and a second sheave mounted on the first shaft coupled to the weight shafts of the
20 second weight housing with belts.

21 26. (Original)

22 The harvester of claim 24, wherein the total weight of the eccentrically mounted weights is
23 in excess of 450 pounds.

24 27. (Original)

25 The harvester of claim 24, wherein the angular velocity of the drum does not exceed 200
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1 revolutions per minute.

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